

Tsuneo MAKI et al., S.N. 10/532,852  
Page 2

Dkt. 2271/74323

**Listing of Claims**

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

1. (currently amended) A belt conveyance apparatus comprising:

a drive roller;

a driven roller rotating in accordance with an operation of the drive roller;

a conveyance belt engaged with the drive roller for rotationally driving the conveyance belt and the driven roller, the conveyance belt being provided with a first bead and a second bead formed on an inner side thereof; and

driven roller support means for rotatably supporting the driven roller, the driven roller support means being configured to allow the driven roller to move in a thrust direction,

wherein, in operation, ends of the drive roller and the driven roller interface with the first bead and second bead of the conveyance belt so as to allow and restrict a deflection of the conveyance belt in the thrust direction, and the driven roller is movable in the thrust direction according to a deflection of the conveyance belt, and

wherein a frictional force in the thrust direction between the driven roller support means and the driven roller is smaller than a frictional force of the driven roller and the conveyance belt.

2. (previously presented) The belt conveyance apparatus as claimed in claim 1, wherein the first and second beads are formed on each side of the conveyance belt in a direction of width

Tsuneco MAKI et al., S.N. 10/532,852  
Page 3

Dkt. 2271/74323

thereof, and a clearance between a first end of the driven roller and the driven roller support means on a side of the first end of the driven roller is greater than a sum of a first clearance between a second end of the driven roller and the second bead which is located on a side of the second end of the driven roller, a second clearance between a first end of the drive roller and the first bead which is located on a side of the first end of the drive roller, and a third clearance between a second end of the drive roller and the second bead which is located on a side of the second end of the drive roller.

3. (previously presented) The belt conveyance apparatus as claimed in claim 1, wherein at least one of the first bead and second bead is provided on an inner side of the conveyance belt, and a groove is formed on a circumferential surface of the drive roller so that the [[bead]] at least one of the first bead and second bead is brought into engagement with the groove.

4. (previously presented) The belt conveyance apparatus as claimed in claim 1, wherein a coefficient of friction between an end portion of the drive roller and at least one of the first bead and second bead is set smaller than a coefficient of friction of a center portion of the drive roller and the at least one of the first bead and second bead.

5. (previously presented) The belt conveyance apparatus as claimed in claim 4, wherein a taper is formed on an end surface of the drive roller so that, in an unoperated state, a non-tapered portion of the end surface overlaps a side surface of at least one of the first bead and second bead.

Tsunco MAKJ et al., S.N. 10/532,852  
Page 4

Dkt. 2271/74323

6. (original) The belt conveyance apparatus as claimed in claim 5, further comprising a first rotational member constituting the center portion of the drive roller and a second rotational member constituting the end portion of the drive roller, wherein an outer diameter of the second rotational member is within a range of  $\pm 1.0$  mm of an outer diameter of the first rotational member.

7. (original) The belt conveyance apparatus as claimed in claim 5, wherein a taper angle of the taper with respect to the end surface of the drive roller is set in a range from 10 degrees to 45 degrees.

8. (original) The belt conveyance apparatus as claimed in claim 1, wherein an axis of the drive roller and an axis of the driven roller are substantially perpendicular to a direction of conveyance of a paper sheet, and the axis of the driven roller is inclined with respect to the axis of the drive roller.

9. (previously presented) The belt conveyance apparatus as claimed in claim 8, wherein at least one of the first bead and second bead is formed on one side of an inner surface of the conveyance belt so that, in an operated state, the at least one of the first bead and second bead interferes with a lower one of opposite ends of the driven roller in operation.

10. (previously presented) The belt conveyance apparatus as claimed in claim 9,

Tsuneo MAKI et al., S.N. 10/532,852  
Page 5

Dkt. 2271/74323

wherein a taper is formed on an end surface of the drive roller so that, in an unoperated stated, a non-tapered portion of the end surface overlaps a side surface of the at least one of the first bead and second bead.

11. (original) The belt conveyance apparatus as claimed in claim 10, wherein a taper angle of the taper with respect to the end surface of the drive roller is set in a range from 10 degrees to 45 degrees.

Claim 12 (canceled).

13. (previously presented) The belt conveyance apparatus as claimed in claim 1, wherein a coefficient of friction between the drive roller and the conveyance belt is greater than a coefficient of friction between the driven roller and the conveyance belt.

14. (previously presented) The belt conveyance apparatus as claimed in claim 1, further comprising pressing means for pressing the conveyance belt to the drive roller, wherein the pressing means is located at a position opposite to the drive roller with the conveyance belt interposed therebetween.

15. (currently amended) An image forming apparatus comprising:  
image forming means for forming an image; and  
a belt conveyance apparatus including:

Tsunco MAKI et al., S.N. 10/532,852  
Page 6

Dkt. 2271/74323

a drive roller;

a driven roller rotating in accordance with an operation of the drive roller;

a conveyance belt engaged with the drive roller for rotationally driving the conveyance belt and the driven roller, the conveyance belt being provided with a first bead and a second bead formed on an inner side thereof; and

driven roller support means for rotatably supporting the driven roller, the driven roller support means being configured to allow the driven roller to move in a thrust direction,

wherein, in operation, ends of the drive roller and the driven roller interface with the first bead and second bead of the conveyance belt so as to allow and restrict a deflection of the conveyance belt in the thrust direction, and the driven roller is movable in the thrust direction according to a deflection of the conveyance belt, and

wherein a frictional force in the thrust direction between the driven roller support means and the driven roller is smaller than a frictional force of the driven roller and the conveyance belt.

16. (previously presented) The image forming apparatus as claimed in claim 15, wherein the first and second beads are formed on each side of the conveyance belt in a direction of width thereof, and a clearance between a first end of the driven roller and the driven roller support means on a side of the first end of the driven roller is greater than a sum of a first clearance between a second end of the driven roller and the second bead which is located on a side of the second end of the driven roller, a second clearance between a first end of the drive roller and the first bead which is located on a side of the first end of the drive roller, and a third clearance

Tsuneo MAKI et al., S.N. 10/532,852  
Page 7

Dkt. 2271/74323

between a second end of the drive roller and the second bead which is located on a side of the second end of the drive roller.

17. (previously presented) The image forming apparatus as claimed in claim 15, wherein at least one of the first bead and second bead is provided on an inner side of the conveyance belt, and a groove is formed on a circumferential surface of the drive roller so that the at least one of the first bead and second bead is brought into engagement with the groove.

18. (previously presented) The image forming apparatus as claimed in claim 15, wherein a coefficient of friction between an end portion of the drive roller and at least one of the first bead and second bead is set smaller than a coefficient of friction of a center portion of the drive roller and the at least one of the first bead and second bead.

19. (previously presented) The image forming apparatus as claimed in claim 18, wherein a taper is formed on an end surface of the drive roller so that, in an unoperated state, a non-tapered portion of the end surface overlaps a side surface of the at least one of the first bead and second bead.

20. (original) The image forming apparatus as claimed in claim 19, further comprising a first rotational member constituting the center portion of the drive roller and a second rotational member constituting the end portion of the drive roller, wherein an outer diameter of the second rotational member is within a range of  $\pm 1.0$  mm of an outer diameter of the first rotational

Tsuneo MAKI et al., S.N. 10/532,852  
Page 8

Dkt. 2271/74323

member.

21. (original) The image forming apparatus as claimed in claim 19, wherein a taper angle of the taper with respect to the end surface of the drive roller is set in a range from 10 degrees to 45 degrees.

22. (original) The image forming apparatus as claimed in claim 15, wherein an axis of the drive roller and an axis of the driven roller are substantially perpendicular to a direction of conveyance of a paper sheet, and the axis of the driven roller is inclined with respect to the axis of the drive roller.

23. (original) The image forming apparatus as claimed in claim 22, wherein the bead is formed on one side of an inner surface of the conveyance belt so that, in an operated stated, the bead interferes with a lower one of opposite ends of the driven roller in operation.

24. (previously presented) The image forming apparatus as claimed in claim 23, wherein a taper is formed on an end surface of the drive roller so that, in an unoperated stated, a non-tapered portion of the end surface overlaps a side surface of the at least one of the first bead and second bead.

25. (original) The image forming apparatus as claimed in claim 24, wherein a taper angle of the taper with respect to the end surface of the drive roller is set in a range from 10

Tsunco MAKI et al., S.N. 10/532,852  
Page 9

Dkt. 2271/74323

degrees to 45 degrees.

Claim 26 (canceled).

27. (previously presented) The image forming apparatus as claimed in claim 15, wherein a coefficient of friction between the drive roller and the conveyance belt is greater than a coefficient of friction between the driven roller and the conveyance belt.

28. (previously presented) The image forming apparatus as claimed in claim 15, further comprising pressing means for pressing the conveyance belt to the drive roller, wherein the pressing means is located at a position opposite to the drive roller with the conveyance belt interposed therebetween.